**Mozambique assignments**

**DAY 1**

**1. introduction**

- who is who? Any skills already?

- goals of the training: intro in ddj, theory and skills

- method: hands-on subgroups

**2. what is ddj?** Intro movie, what is your conclusion

what is ddj in ppt, steps and examples

**3. let’s do all in one; to check**

Pop moz from wikipedia: <https://en.wikipedia.org/wiki/Mozambique>

Is that a good source?

a. scrape the table with chrome:

- chrome browser , extensions. table capture

have chrome browser and search for table capture extension, in chrome store, add to chrome

- largest city and towns, highlight and scrape, copy, paste in excel; sheets 2

- rework to sheet 1 and do the assignments in the sheet

- find total pop moz and put that in a cel, what is your conclusion from perc?

- import spreadsheet (blad 1) in tableau and make a bar graph and a map ( set city names as geo, and edit map location.

- which type of graph?

- save as, (register first) at the bottom choose download export as pic and embed, or choose share for embed

b. scraping with outwit

open outwit and paste the wiki link

go to data and click tables

select row 48-57, export as xls

open in excel en clean: header column, delete col, del text and set to number

explain difference text and number

do the same calculation

c. Question:

What do you think: do you need an intro to excel basics: simple formula, total average, filter, order, graph, copy paste special?

About csv and xls how to import?

Or Basic excel training use coke.xls, if needed show ribbon and most import jobs; if needed show how to imput text and figures in cells and command line. Example: coke.xls

or If not needed:

continue with creating subgroups and choose topic for each group

4. Let’s check your searching and finding data for DDJ

- find population of the Netherlands;

\* how do you search, engine and keywords, what does more words imply- wider or smaller

\* check credibility by url

\* how to search on a page for a word or number ctr-F

\* advanced searches using file type and or site

mozambique gdp filetype:xls

mozambique site:bbc.co.uk

\* using exact search:

" the second largest city of Mozambique is"

" the S&P rating of Mozambique is" look at #2

**Which are your standard data sources? Store and exchange sources in the newsroom?**

Standard sources:

international

<https://databank.worldbank.org/data/source/world-development-indicators>

try don’t load data for mozambique, GDP growth , unemployment , government debt

<https://tradingeconomics.com/mozambique/rating>

explore trading economics

<https://data.imf.org/?sk=388DFA60-1D26-4ADE-B505-A05A558D9A42&sId=1479329334655>

IMF financial data

<https://datacatalog.worldbank.org/dataset/global-financial-inclusion-global-findex-database>

Financial inclusion

<https://www.who.int/countries/moz/en/>

health data

<https://www.cia.gov/library/publications/the-world-factbook/geos/mz.html>

basic moz data

National:

<http://www.ine.gov.mz/>

bureau statistics….anybody experience

Open data mozambique:

<https://www.theglobaleconomy.com/Mozambique/>

<http://mozambique.opendataforafrica.org/>

<http://dataportal.opendataforafrica.org/>

**5. Working with pdf**

Open Barclays pdf; Mozambique p.74, table p.77

scrape key market data using tabula

export file is .csv

import in excel

other solution services on de web: pdf to excel

<https://www.pdftoexcel.com/>

**6. Work in small groups on the project; report tomorrow 9.00**

**Day 2**

**0. Report subgroups, topics discussion**

**1. Repeat day** 1: practice scraping a table, clean in xls, and make viz in tableau

use: <https://en.wikipedia.org/wiki/Provinces_of_Mozambique>

population per provinces for 2017, and density

You can use that for example for mapping election data; victims of natural disasters etc

**2. Scraping financial data using trading economics**

- what are the sovereign ratings for sun sahara african countries

- scrape web page, select countries, export as excel and clean

- import in tableau and make graph and map

- use pivot tables to do calculations in excel en tableau

- is moz rating high or low, what is high or low (average)

**3. viz with Flourish**

<https://flourish.studio/>

make fast viz with flourish

my examples: <https://app.flourish.studio/projects>

Try also your yesterday data in Flourish

**4. Work in projects**

**5. some statistic**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Nominal  just categories | Ordinal  categories with order | ratio/interval  measurement scale |
| Var 1 | modal ; median  range  bar graph. Pie graph |  | Average  standard dev  histogram  line graph |
| Var 2 | Relationship  perc diff  chi square  double bar graph |  | Relationship  correlation  regression  trend line  scatter diagram |

Explore statistics using GDP and life expectation for sub sahara

download data from Worldbank, clean up and calc and viz

or use life\_gdp.xlsx

**6. More excel/advanced:**

example: mayors.xls

split column

merge column

playing with pivot tables, association and correlation

DISCUSS DIFFERENT GRAPH TYPES IN RELATIONS WITH DATA

<https://flourish.studio/2018/09/28/choosing-the-right-visualisation/>

**Moving chart**

download worldbank health spending and life expectancy for sub sahara, from 2000

I use life\_gdp xls in Flourish and tableau

**7. work on projects**

**Day 3**

**1. report projects**

**2. building an advanced scraper** in outwit for data from various web pages

using trading economics, sub sahara countries, key financial data; gdp per cap, inflation, interest, debt to gdp

- about html tags

- building scraper:tradingeconomics.com\_moz\_scraper: <https://tradingeconomics.com/mozambique/indicators>;change country name!

- running scrapper list of countries using auto explore: <https://tradingeconomics.com/countries>, list and select countries; only 100 allowed, build url list if sub sahara countries; 1 download a list in html: outwithub list...html; change the countries country list.html; select countries and run scraper

- export data to xls and clean

make viz based on xls in tableau

**3. China loan shark**

Download debt from wordbank data: Look at folder debt: data debt4.xlsx and debt.doc

Compare your country with other Sub Sahara africa? What is your conclusion?

Foreign debt (chinese debt: use <https://www.nytimes.com/2019/04/26/opinion/china-belt-road-initiative.html>)

data: <http://www.sais-cari.org/data-chinese-loans-to-africa> for Belt and Road Initiative.

data: china.xlsx

What is your conclusion?

**3. Big Mac Index**

Folder Big Mac

read bigmac.doc for how to / calculations

The outcome is in bigmac\_ha.xlsx

you could check my data and calc for moz only?

Is your currency under or over valued according to BMI?

**4. finalize work in projects**

**5. presentation of projects using digital projection: ppt, viz and xls**

**6. evaluation: what do you take home?**